EXTREME UNNAMED ABERRATIONS OF *MANIOLA JURTINA* L. (LEP.: SATYRIDAE)

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Variation is very extensive in *Maniola jurtina*: ground colour forms range from white to black, forwing fulvous varies from white to deep red or brown and spotting from total absence to marked enlargement and increase in number. Gynandromorphs and homoeosis are very uncommon. Many forms have been named, although in a number of cases these names are unhelpful in advancing our understanding of the genetics of variation. The reason for this is that many aberrations, often individually named, can be fitted into a series of transitional forms, and thus may not be genetically "distinct" from the "major" aberrations at either end of the series. Conversely, distinctive "major" aberrations may have rare extreme forms at either end of the graded series which may appear to be separate forms but are likely to be genetically linked. This paper discusses three such aberrations.

There have been two major reviews covering aberrations of *jurtina* – by Leeds (1948), and more recently by Goodson. Leeds organised the aberrations into a logical sequence of graded forms, occasionally ignoring the laws of priority by renaming forms to fit in with his ordered series. Despite this invalidity, or perhaps because of it, the end product is straightforward and easy to use. Goodson's review was part of a larger exercise to catalogue and describe every named variety of British butterfly. The *jurtina* section is more comprehensive than that of Leeds, and original names are restored. Since the compilation only one further major aberration has been described: ab. *postmultifidus* Lipscomb. (Lipscomb, 1980).

ab. postmultifidus Lipscomb

Figure 1 represents a typical female *postmultifidus*. Figure 2 is a more extreme, and much rarer, example. Figure 3 and 4 appear, at first sight, to be quite distinct aberrations. Closer examination suggests that they may be part of a graded series which contains *postmultifidus*. For example, the fulvous colouration on the upperside of the forewing is markedly reduced; in the hindwing the median band of the underside is narrowed (both characteristics of *postmultifidus*) and, although very indistinct, there are the bands of darker scaling along the veins across the lower half of the median band. *Postmultifidus* specimens can be strongly marked (as in figs. 1 and 2), or weakly marked (as in figs. 3 and 4). My own breeding

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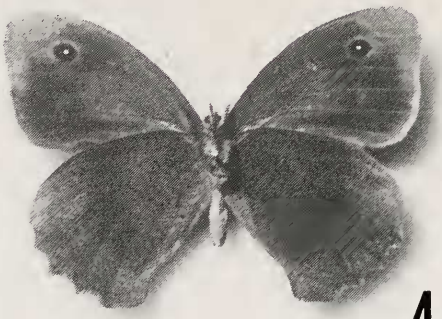

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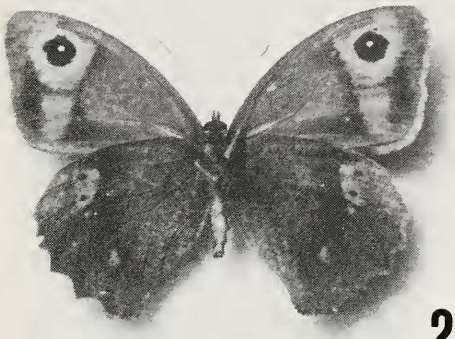

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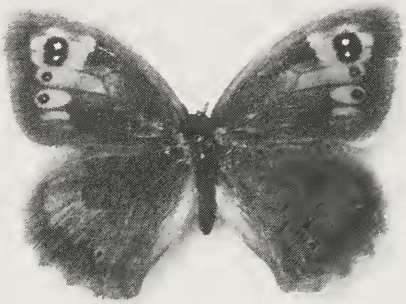

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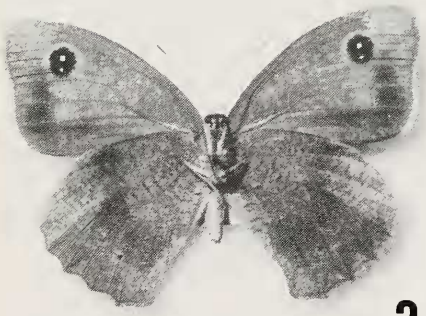

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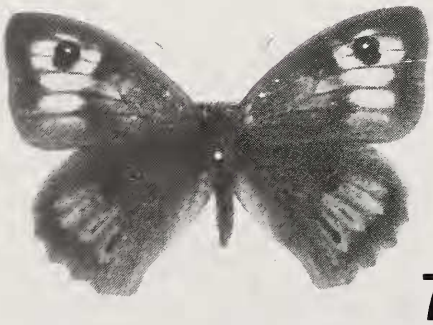

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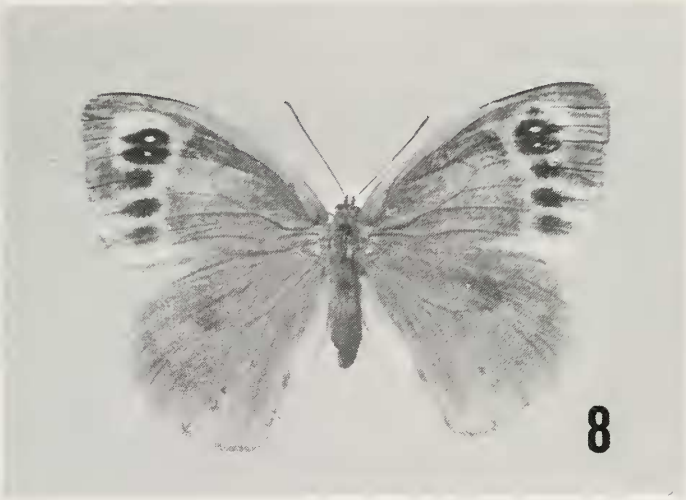

experiments suggest that this aberration is inherited on a multifactorial basis, and in consequence is variable in its expression.

ab. excessa Leeds

Figure 5 shows a typical, although unusually well developed, female ab. *excessa*. Figure 6 shows development of the hindwing character (ab. *postexcessa* Leeds), this being the only known specimen with two spots on the upperside of each hindwing. Figure 8 is a remarkable aberration, an extreme form of *excessa,* probably unique. The spots are slightly streaked outwards, a characteristic that sometimes accompanies spot enlargement both in *jurtina* and other satyrids such as *Aphantopus hyperantus* L., *Lasiommata megera* L., *Erebia aethiops* L. and *Coenonympha tullia* L.

Figure 7 represents another probably unique specimen. The outer end of the black hindwing rays are the position for a normal row of submedian spots, such as occur on the underside of some specimens, especially marked in *postexcessa*. The inward raying is a most unusual character, unknown hitherto from either *jurtina* or other satyrids. In *Pyronia tithonus* L., the British satyrid most

Key

Fig. 1 ab. *postmultifidus*. Stour Row, Dorest. July 1981 (R. Barrington).
Fig. 2 ab. *postmultifidus*. Guildford, Surrey. August 1946. (J. C. B. Craske in BM(NH)).
Fig. 3. extreme ab. *postmultifidus*. Newlands Corner, Surrey. July 1960. (R. E. Stockley in BM(NH)).
Fig. 4. extreme ab. *postmultifidus*. "Ridgeway". June 1934. (J. How in BM (NH)).
Fig. 5. ab. *excessa*. Stour Row, Dorset. June 1985. (R. Barrington).
Fig. 6. ab. *postexcessa*. Bere, Hants. July 1968. (R. M. Craske).
Fig. 7. unnamed. Ringmer, East Sussex. July 1985. (R. Dennis).
Fig. 8. extreme ab. *excessa*. Whiteparish, Wilts. July 1973. (R. C. Revels). (x 1.4).

closely allied to *jurtina*, extreme hindwing spotting forms are more frequent, but none show inward raying – the typical pattern being an oval shape accompanied by outward raying.

Within its normal range of expression, ab. *excessa* is most variable. Lipscombe (1971) reported breeding ab.*excessa* as a simple recessive; however as this breeding experiment was concerned with the melanic ab. *atrescens* Leeds which he clearly showed to be a lethal form, the results for the *excessa* form may have been biased by the lethal gene. My own breeding experiments suggest that *excessa* is a variable, multifactorial form, and it seems likely that figure 8 is simply at the most extreme end of the range of *excessa* forms, but figure 7, with its unique inward black raying may be a quite separate and new form, although one is wary of giving it a new name to add to the already long list of named *jurtina* aberrations.

Acknowledgements

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